

NCDOT Guidelines for the Level of Pedestrian Accommodation in Work Zones July 2018

The maintenance of pedestrian traffic in ways that are cost-effective, responsive to local site conditions, and consistent with the needs of a wide range of road users, including people with disabilities, is a commitment of NCDOT. NCDOT complies with the needs and the control of pedestrians during necessary roadway and bridge construction in accordance with the requirements of the MUTCD, Chapter 6. These guidelines are intended to act as a supplement to existing NCDOT practices related to pedestrian access and ADA compliance.

NCDOT currently uses a flow chart (located on page 4) to determine the necessary accommodation of pedestrians in work zone. This determination is completed in the planning phase of projects, but the considerations of pedestrian needs are integrated into the entire project development process.

During the planning phase, Community Impact Assessments (CIAs), completed by NCDOT and its consultants, document the presence and volume (if warranted) of existing pedestrian activity in the Direct Community Impact Area (DCIA). Warrants for pedestrian volume counts include, but are not limited to, the proximity and level of connectivity of the existing pedestrian facility infrastructure to pedestrian traffic generators, the presence of existing sidewalks, worn paths, and/or greenways and known pedestrian behavior observed by local area personnel. The actual pedestrian volumes measured at any location within the impact area will be used to determine the appropriate level of pedestrian accommodations. Information relative to the location of fixed transit routes/stops in the DCIA, including frequency, service area, volume of passengers and special users, is also captured within CIAs.

The documentation of an initial on-site survey (including pedestrian volume counts, when warranted) provided by planning personnel will help to decide the level of pedestrian accommodation for the project. During this review, the following will be considered:

- Whether the existing population, travel, and attractors indicates an absence of need or the need for basic, moderate, or full accommodations;
- Whether environmental or social impacts, including Title VI of the Civil Rights Act, Environmental Justice EO or the American Disabilities Act (ADA), outweigh the level of accommodation determined by pedestrian volumes;
- Whether safety would be compromised by trying to accommodate pedestrians through the work zone during construction;
- Whether total cost of pedestrian accommodations to the appropriate system (i.e., interstate, primary, secondary, or urban system) would be excessively disproportionate to the need for the facility; and
- Impacts of pedestrian accommodation to the overall project time and project completion.

When necessary, seven-day pedestrian volume counts should be requested through the NCDOT Traffic Safety Unit or conducted in accordance with Traffic Safety's data specifications. Request forms and count specifications are available through the following link:

<https://connect.ncdot.gov/resources/safety/Pages/Traffic-Data.aspx>

Once pedestrian counts are obtained, the following thresholds are to be used to determine the level of pedestrian accommodation for the duration of construction.

Required Level of Pedestrian Accommodations

7-day Average Pedestrian Volume, ped/day	Pedestrian Accommodation Level
Less than 10	Absence of Need
10-99	Basic
100-499	Moderate
500 or more	Full

Absence of Need for Pedestrian Accommodations only applies when a pedestrian volume count verifies that there is a 7-day average of less than 10 pedestrians measured at any location within the project limits AND there are no existing sidewalks, greenways, or worn paths. Projects that fall into this category will not require pedestrian accommodations in the work zone. If existing sidewalks, greenways, or worn paths are present (even if the pedestrian 7-Day Average Count is less than 10), the project shall follow the Basic Pedestrian Accommodations section.

Basic Pedestrian Accommodations will allow full pedestrian facility closures with temporary off-site detours, if on-site accommodations are impractical.

If pedestrians are maintained on-site, the work zone shall maintain the existing quality of ADA devices. No upgrades to the existing quality of ADA devices will be made as part of the work zone to bring the pedestrian accommodations up to current ADA standards, regardless of the final project requirements, except that any pedestrian facility closure will require the use of ADA compliant channelizing devices at the hard and soft closure locations.

If pedestrians are maintained using an off-site detour, the length and condition of the temporary off-site detour should be evaluated and found to be reasonably similar to the existing facilities within the project limits, including the presence and condition of ADA devices. The off-site detour should not exceed ½-mile additional travel distance to pedestrians. If this cannot be obtained, then an off-site detour would not be deemed suitable.

In situations where there is no suitable off-site detour and it is unsafe or impractical to maintain pedestrians on-site, enlisting an on-call pedestrian transport vehicle service (if such exists in the project area), will be considered compliant with this section. Safe pickup and drop off locations will be designated by the Engineer before implementation.

Moderate Pedestrian Accommodations will consider all aspects of basic pedestrian accommodations, as well as higher level accommodations, such as travel lane shifts/changes to accommodate pedestrian paths, signal modifications, adjustments to public transit schedules/routes, and temporary pedestrian facilities. No upgrades to the existing quality of ADA devices will be made as part of the work zone to bring the pedestrian accommodations up to current ADA standards, regardless of the final project requirements, except that any pedestrian facility closure will require the use of ADA compliant channelizing devices at the hard and soft closure locations.

Where practical, the project should be phased to construct any proposed sidewalk on one side of the road early in the project so that pedestrians can be safely maintained on-site. The designer should also consider the installation of pedestrian signals and crosswalk markings early in the project. Once permanent sections of sidewalk are opened, they are to meet the ADA requirements of the final design.

Off-site detours may be utilized, but only if maintaining pedestrians on-site would have a significant impact to construction phasing and the off-site detours do not exceed ½-mile additional travel distance to pedestrians.

Enlisting a pedestrian transport vehicle service will be considered compliant with this section only if the service makes regularly scheduled pickups (suggested 2 per hour during daylight hours) without the need for pedestrians to call the service, with stop locations shown in the Transportation Management Plan (TMP) or as directed by the Engineer.

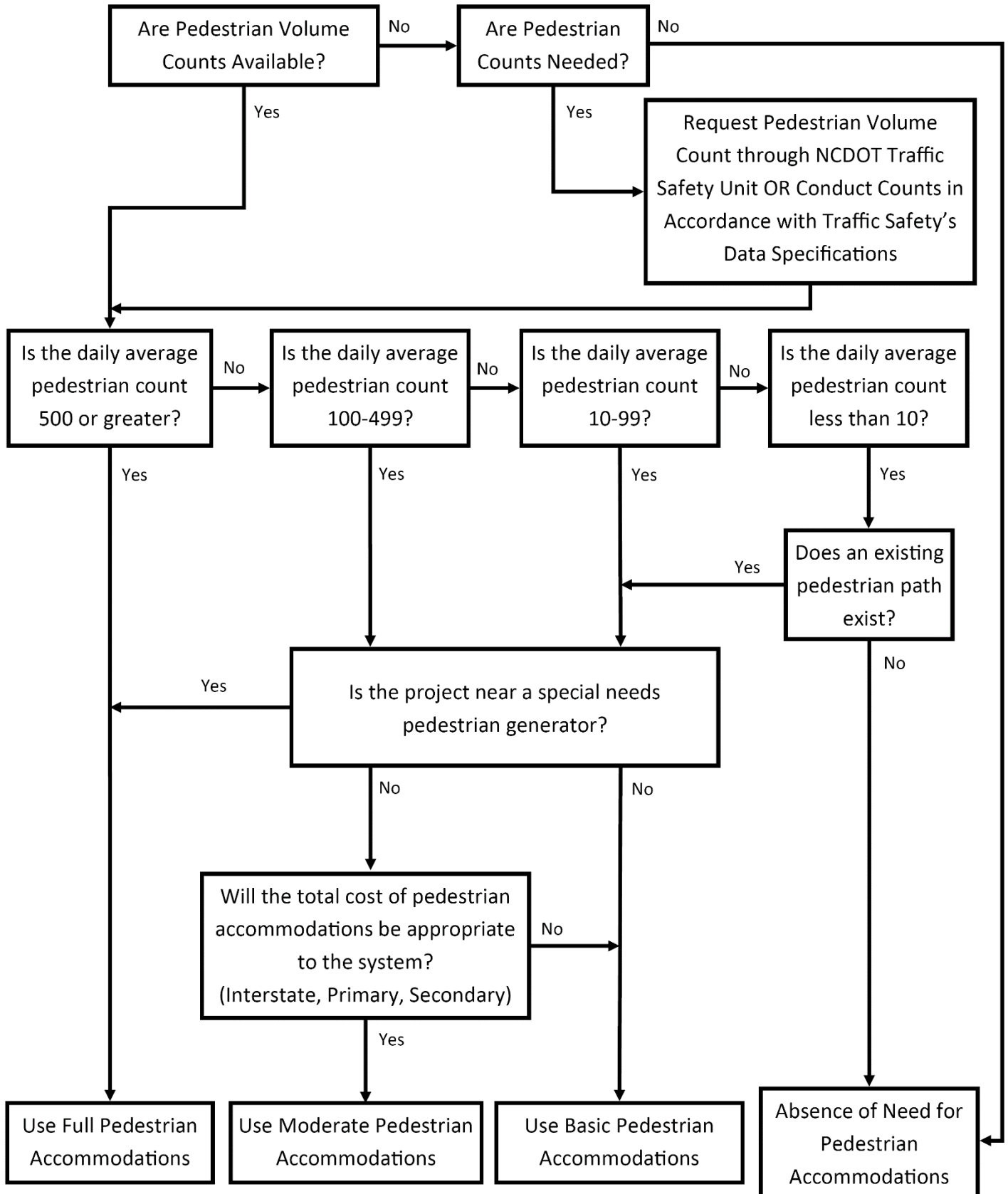
Full Pedestrian Accommodations will require all reasonable efforts to keep pedestrian traffic on-site using facilities matching the quality of the existing paths prior to construction. If practical, the project should upgrade the pedestrian facilities to meet current ADA standards early in the project. All devices added to pedestrian facilities during construction shall be ADA compliant including, but not limited to overhead canopy structures, temporary curb ramps, pedestrian crosswalk signal heads with audible warnings, and detectable warning devices.

Possible strategies at this stage include, but are not limited to, removal of on-street parking to accommodate pedestrian diversions, modified traffic control phasing to build permanent pedestrian facilities early, installation of temporary pedestrian crosswalks and signals, and other temporary pedestrian facilities within the project limits. Public notice, prior to and/or during construction, may be used to ease pedestrian and motorist confusion.

In the unlikely event that an off-site detour is used, it should be brought up to full ADA compliance prior to detouring pedestrian traffic.

Due to likelihood of pedestrian origins/destinations within the work zone and the high volume of pedestrians, a pedestrian transport vehicle service is likely impractical. If used, however, a vehicle service may need to make stops within the work zone to serve pedestrians fully. The transport vehicle service should make regularly scheduled pickups (suggested 3 per hour from 6am-10pm) without the need for pedestrians to call the service, with stop locations shown in the TMP or as directed by the Engineer.

Level of Pedestrian Accommodation Flowchart



COLLABORATING THROUGHOUT THE PROJECT DEVELOPMENT PROCESS

Feasibility Study – Feasibility Studies Unit

A project may be identified for potential pedestrian issues during construction. The Work Zone Traffic Control unit is available at any stage to provide input and advice on the level of pedestrian accommodation, and if appropriate, the types of accommodation that are anticipated. This information will be provided to the Environmental Analysis Unit as background information at the project initiation meeting.

Project Initiation Meeting – Project Development Team

Six to eight months prior to scoping meeting, a project initiation meeting will be held to begin collecting information about the proposed project. Among the items to be discussed, potential detour routes and temporary pedestrian impacts should be included. After the meeting, the Project Manager should request the Community Characteristics Report as stated in the Scoping Procedures.

Community Characteristics Report (CCR) and/or Community Impact Assessment (CIA) - Public Involvement, Community Studies & Visualization Group

These reports provide a broad look at the key characteristics of the study area. During screening for the CCR/CIA, the Planner should consider the potential temporary impacts to pedestrians and discuss the issues at Project Scoping.

Project Scoping Meeting – Project Development Team and Divisions

Within the items to discuss at the Project Scoping Meeting, the potential of temporary impacts to pedestrians during construction should be included. This should tie in with the discussion of alternative routes/detour routes and community features. The Project Scoping Meeting discussion should decide whether there is a need for pedestrian counts. Seven-day pedestrian volume counts should be requested through the NCDOT Traffic Safety Unit or conducted in accordance with Traffic Safety's data specifications. Request forms and count specifications are available through the following link: <https://connect.ncdot.gov/resources/safety/Pages/Traffic-Data.aspx>

Alternative Development – Project Development Team and Divisions

As alternatives are developed, the potential temporary impacts to pedestrians should be considered. Use pedestrian volumes and the *Flowchart to Determine the Level Pedestrian Accommodation in Work Zones* to establish the level of pedestrian accommodation needed in the work zone. Once alternatives are established, the Community Impact Assessment is requested.

Public Meeting – Public Involvement, Community Studies & Visualization Group

If a public meeting is conducted, present information on any potential impacts and try to solicit comments from the project stakeholders. The newsletter/postcard mailing and/or online public engagement could assist in solicitation of comments about temporary pedestrian impacts.

Corridor Design Public Hearing – Public Involvement, Community Studies & Visualization Group

The pedestrian level of accommodation should be presented at the hearing. Comments from the public should be solicited and factored into the selection of the build alternative. The newsletter/postcard mailing and/or online public engagement could assist in solicitation of comments.

Selection of Build Alternative – Project Development Team

The pedestrian level of accommodation should be included in the discussion of alternatives and should factor into the build alternative decision. The team should evaluate the build alternative to determine the level of impact on pedestrians during construction and factor that impact into the decision to proceed with a Build Alternative.

Environmental Document – Project Development Team and Divisions

The findings from the Community Impact Assessment, Public Meeting, and Public Hearing concerning temporary pedestrian impacts should be discussed in the appropriate document. Possible mitigating measures should also be addressed in the document. The level of pedestrian accommodation should be included in the project commitments on the Green Sheet.

Design Public Hearing – Public Involvement, Community Studies & Visualization Group

Build alternative and impacts from the alternative are presented to the public. Because specific design measures are not available yet, only a general discussion of the level of pedestrian accommodation can be included.

Plan Development – Highway Design and TMP Design Team

Commitments and level of accommodations determined during planning will be incorporated into the TMP. A field review of the project and the approaches is a required element prior to designing the Pedestrian Plan. All pedestrian features (sidewalks, footpaths, greenways, shared use paths, etc.) of the project are to be reviewed for condition and ADA compliance prior to the design phase. Once the pedestrian features are known, as well as the level of pedestrian accommodation, the design team shall design a Pedestrian Plan to meet the needs of all pedestrian users for the mainline and side roads impacted by the construction project.

Field Inspection – TMP Design Team, Highway Design and Division

The Pedestrian Plan will be reviewed with Division personnel with a field inspection checklist to ensure that the level of pedestrian accommodations and the details/devices to support maintenance of pedestrian traffic have been incorporated. This review will also address any constructability issues.

Project Construction – Division and TMP Design Team

The Construction team and Contractor will implement the Pedestrian Plan as prepared by the Design Team. The Design Team will routinely review the project to ensure compliance with the Pedestrian Plan and revise, if necessary, to accommodate changes in the field or project schedule. For projects with Full Pedestrian Accommodations or ADA compliance is expected, contact the NCDOT ADA coordinator to afford he/she the opportunity to review the implemented Pedestrian Plan.